

IN THE CLAIMS:

Please amend claims 1, 14 and 32 and add new claims 35 and 36.

1. (Currently Amended) Light wave converter assembly comprising:

a light guide, and

a light wave converter plate adjacent one end of said light guide

wherein the light wave converter exhibits a converter substance operable to convert a part of incident light into light of a longer wavelength, whereby the converted light is guided together with a portion of the unconverted light to an exit port; and the light, converted by the converter substance, together with the unconverted light yields a light with the wavelength spectrum of the color white.

2. (Original) Light wave converter assembly, as claimed in claim 1, wherein the incident light exhibits a wavelength ranging from 380 to 520 nm.

3. (Original) Light wave converter assembly, as claimed in claim 1, further comprising a band pass filter.

4. (Original) Light wave converter assembly, as claimed in claim 2, further comprising a band pass filter.

5. (Original) Light wave converter assembly, as claimed in claim 1, comprising a brightness controller.

6. (Previously Amended) Light wave converter assembly, as claimed in claim 2, comprising a brightness controller.

7. (Previously Amended) Light wave converter assembly, as claimed in claim 3 comprising a brightness controller.

8. (Original) Light wave converter assembly, as claimed in claim 1, wherein the incident light is generated by a polymerization lamp as a light source.

9. (Original) Light wave converter assembly, as claimed in claim 2, wherein the incident light is generated by a polymerization lamp as a light source.

10. (Original) Light wave converter assembly, as claimed in claim 3, wherein the incident light is generated by a polymerization lamp as a light source.

11. (Original) Light wave converter assembly, as claimed in claim 5, wherein the incident light is generated by a polymerization lamp as a light source.

12. (Previously Amended) Light wave converter assembly, as claimed in claim 1, wherein the converter substance is chosen from substances, which, when optically excited, can luminesce.

13. (Previously Amended) Light waver/ converter assembly, as claimed in claim 2, SP

wherein the converter substance is chosen from substances, which, when optically excited, can luminesce.

14. (Currently Amended) Light waver/ converter assembly, as claimed in claim 8, SP

wherein the converter substance is chosen from substances, which, when optically excited can luminesce.

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15. (Previously Amended) Light wave converter assembly, as claimed in claim 1, wherein the converter substance is at least one of inorganic dyes, including the auxiliary group elements and elements from the group of lanthanides, and organic dyes, including the class of perylenes, aldazines, thioxanthenes and/or naphthalimides.

16. (Previously Amended) Light wave converter assembly, as claimed in claim 2, wherein the converter substance is at least one of inorganic dyes, including the auxiliary group elements and elements from the group of lanthanides and organic dyes, comprising the class of perylenes, aldazines, thioxanthenes and/or naphthalimides.

17. (Previously Amended) Light wave converter assembly, as claimed in claim 8, wherein the converter substance is at least one of inorganic dyes, including the auxiliary group elements and elements from the group of

lanthanides and organic dyes, including the class of perylenes, aldazines, thioxanthenes and/or naphthalimides.

18. (Original) Light wave converter assembly, as claimed in claim 1, wherein the light guide is flexible.

19. (Original) Light wave converter assembly, as claimed in claim 2, wherein the light guide is flexible.

20. (Original) Light wave converter assembly, as claimed in claim 8, wherein the light guide is flexible.

21. (Previously Amended) Light wave converter assembly, as claimed in claim 1, wherein the diameter of the exit port ranges from 1 to 10 mm.

22. (Previously Amended) Light wave converter assembly, as claimed in claim 2, wherein the diameter of the exit port ranges from 1 to 10 mm.

23. (Previously Amended) Light wave converter assembly, as claimed in claim 8, wherein the diameter of the exit port ranges from 1 to 10 mm.

24. (Previously Amended) Light wave converter assembly, as claimed in claim 1, including a coupling or a thread.

25. (Original) Light wave converter assembly, as claimed in claim 1, wherein the converter substance is present in a quantity ranging from 0.005 to 5% by weight, based on a substance to be dyed.

26. (Previously Amended) Light wave converter assembly, as claimed in claim 1, wherein the converter assembly is a hot steam sterilized converter assembly.

27. (Original) Light wave converter assembly, as claimed in claim 1, wherein the light wave converter exhibits one of a form of a filter disk, a glass fiber or a glass rod.

28. (Original) Light wave converter assembly, as claimed in claim 1, wherein the converter assembly is a module of a polymerization lamp.

29. (Original) Use of a light wave converter as claimed in claim 1 in a dental process.

30. (Original) Use of a light wave converter as claimed in claim 28, for diagnostic purposes.

31. (Previously Amended) Process, comprising the steps: a) provision of a light wave converter assembly, comprising a light guide and a light wave converter, wherein the light wave converter exhibits a converter substance, which in use converts a part of incident light into light of a longer wavelength, and wherein the converted light is guided together with a portion of the unconverted light to an exit port, and b) connection of the light wave converter to a polymerization device, c) at least one of illumination and transillumination of hard tooth substance with light which is generated by the polymerization device and is converted by the light wave converter.

32. (Currently Amended) A dental photopolymerization system ~~for use in dental procedures~~, comprising a light ~~wave~~ wave converter assembly with a light guide and a light wave converter,

wherein the light wave converter exhibits a converter substance operable to convert a part of incident light into light of a longer wavelength, whereby the converted light is guided together with a portion of the unconverted light to an exit port; and the light, converted by the converter substance, together with the unconverted light yields a light with the wavelength spectrum of the color white in order to illuminate hard tooth substances.

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33. (Original) A photopolymerization system according to claim 32, wherein the incident light exhibits a wavelength ranging from 380 to 520 nm.

34. (Original) A photopolymerization system according to claim 33, wherein the incident light is generated by a polymerization lamp as a light source.

35. (Newly Added) The system according to claim ³² 31 wherein said light wave converter includes a light wave converter plate adjacent one end of said light guide.

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36. (Newly Added) The assembly of claim 1, wherein the exit port outputs a directed form of said light with the wavelength spectrum of the color white in order to illuminate a tooth surface for facilitating a dental procedure.